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10/526,098

02/25/2005

Yves Chatrenet

190-84

2667

2746

7590

11/13/2007

WILLIAM H. EILBERG

THREE BALA PLAZA

SUITE 501 WEST

BALA CYNWYD, PA 19004

EXAMINER

TOWA, RENE T

ART UNIT

PAPER NUMBER

3736

MAIL DATE

DELIVERY MODE

11/13/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/526,098 | Applicant(s) CHATRENET, YVES | |
| | Examiner Rene Towa | Art Unit 3736 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 12-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>2/25/05</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

2. Claims 13-14 & 16-22 are objected to because of the following informalities:

In regards to claim 13, at line 2, the limitations "it" renders the claim indefinite; for example, one cannot be certain what the pronoun is supposed to represent.

In regards to claim 14, at line 3, "the bearing force" should apparently read --a bearing force-- to avoid a potential lack of antecedent basis problem.

In regards to claim 16,

at line 4, "the lower bearing base" should apparently read --the lower support base-- as per line 3 of claim 12;

at line 6, remove "in particular" to avoid a potential indefiniteness problem.

In regards 19, line 7, "the lower bearing base" should apparently read --the lower support base-- as per line 3 of claim 12

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

At line 4, the limitation "preferably" renders the claim indefinite; for example, it is unclear whether the portion of the claim following the limitation is part of the claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

"A system" as used hereinafter is intended to mean "a method" and/or "a device for its practice"

6. **Claims 12-14 & 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (US 5,174,402) in view of Popov (EP 1 183 996) further in view of Livingston (US 6,227,047).

Chen discloses a device, comprising:

a lower support base 3 adapted to support a standing patient in plantar support on said lower support base 3,

an upper support bracket 15 movable vertically above the lower support base 3 and conformed to bear vertically on the head of said patient,

means (11, 14) for selectively immobilizing the upper bearing bracket 15 in vertical position,

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means 15 for measuring the vertical position of the upper support bracket 15,
and

plantar support sensors 18 in the lower support base 3 adapted;

wherein the system has a vertical column 31 which carries the upper support bracket 15 and connects it to the lower support base 3;

wherein the system further comprises a computation unit 22 associated with memory means and display means (221, 222) and receiving signals from the vertical position measuring means 15 and the plantar support sensors 18 of the lower bearing base 3 (see figs. 1-7; col. 1, lines 6-15 & 35-55; col. 2, lines 20-42).

Chen discloses a system, as described above, that fails to explicitly teach a muscle strength, self-stretching, or a force measuring technique.

However, **Popov** discloses a self-stretching method, comprising the steps of:

a) placing the patient in a supine or standing position on the lower support base 8a,

c) measuring the amplitude of self-stretching of the patient by allowing the upper support bracket 6 to slide up and down according to vertical movements of the head of the patient and storing successive positions of the upper support bracket 6,

d) determining the maximum self-stretching value corresponding to the highest position recorded during the previous step,

f) measuring the self-stretching forces by storing the lifting value exerted by the head of the patient on the upper support bracket 6 when the latter is immobilized vertically (see figs. 1-3; see translated paragraphs 002-003 & 005-006).

Livingston discloses muscle strength measuring system comprising a means (i.e. loading cell) capable of measuring vertical force that the head of a patient applies thereon;

wherein the system further comprises a computation unit 222 associated with memory means 218 and display means (216, 220) and receiving signals from the load cell (see figs. 1-3c & 8a-9b; col. 1, lines 6-16; col. 3, lines 11-17 & 52-67; col. 4, lines 58-64; col. 5, lines 21-33; col. 6, lines 54-63; col. 13, lines 26-65).

In regards to **claims 12-14 & 16**:

Since Chen teaches a body height measurement device and Popov teaches a self-stretching technique to promote height growth, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to modify a system similar to that of Chen to include a self-stretching technique as taught by Popov in order to promote patient growth.

Similarly, since Popov teaches a self-stretching exercising technique, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to provide a system similar to that of Chen as modified by Popov, above, with a muscle strength measuring system as taught by Livingston in order to evaluate the isometric strength of the patient's muscles.

Moreover, since it is known that one of the major shortcomings of measuring the total height of a patient to detect growth includes errors associated spine compression and head posture (see col. 1, lines 12-45 of US 4,883,066), it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to provide a

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system similar to that of Chen as modified by Popov and Livingston above, with a means for measuring the vertical force of the patient in order to simultaneously establish the degree of spine compression, head posture and height of the patient so as to respectively determine what level of spine compression results in a given height.

Even moreover, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to provide a system similar to that of Chen as modified by Popov and Livingston with a computing unit, storage, and display unit as taught by Livingston in order to store and display the measured force and/or height.

Even moreover yet, it would have been obvious to one of ordinary skill in the art the time Applicant's invention was made to provide a system similar to that of Chen as modified by Popov and Livingston, above, with a test for maintained normal plantar support of the foot or feet of the patient as claimed in order to ascertain that the patient only stretches the spine and neck region without raising the posterior area of the foot thereby resulting in an accurate height and/or growth measurement.

7. **Claim 15 is** rejected under 35 U.S.C. 103(a) as being unpatentable over Chen ('402) in view of Popov ('996) and Livingston ('047) further in view of Minkow et al. (US 4,711,448).

Chen as modified by Popov and Livingston teaches a system, as described above, that fails to explicitly teach an isometric exercise method.

However, **Minkow et al.** disclose a system comprising an anterior support 64 adapted to constitute a frontal bearing against which the anterior base of the thigh of the patient can bear on flexing by less than 30° or less than 20° (see figs. 1 & 3B).

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Since Livingston teaches a system for evaluating a variety of muscles, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to modify a system similar to that of Chen as modified by Popov and Livingston, above, to include an anterior support similar to that of Minkow et al. in order to exercise the muscles of the thighs.

Similarly, since Livingston teaches a system wherein a plurality of forces associated with a variety of body portions are measured via load cell during testing, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to modify a system similar to that of Chen as modified by Popov, Livingston and Minkow et al., above, to include an anterior support with a means for measuring the forward muscular force of the thigh in order to evaluate isometric strength thereof.

8. **Claims 17 & 19-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen ('402) in view of Popov ('996) and Livingston ('047) further in view of Wiley (US 5,398,696).

Chen as modified by Popov and Livingston teaches a system, as described above, that fails to explicitly teach an isometric exercise method.

However, **Wiley** discloses a force exercise method comprising the steps of:

g) recording a maximum force,

h) & i) selecting a force threshold lower than the maximum force,

i) determining the maximum endurance time by measuring the maximum time for which a force greater than or equal to the force threshold is maintained;

wherein the system further comprises comprising a computation unit associated with memory means and display means, the memory means containing a stored program for controlling the computation unit, the stored program including in particular an isometric exercise sequence;

j) in an intermittent contraction mode, generating an intermittent signal detectable by the patient to prompt alternate contractions and relaxations and counting the number of contraction reaching the force threshold after a sufficient relaxation characterized by a sufficiently low lifting force;

m) wherein the stored program includes an endurance measurement sequence for measuring the time for which an appropriate applied force is maintained (see abstract; col. 3, lines 1-60).

Since Livingston teaches an isometric force measuring method, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to provide a system similar to that of Chen as modified by Popov and Livingston, above, with an isometric exercise method similar to that of Wiley in order to simultaneously lower the patient's resting blood pressure during exercise.

9. **Claim 18 & 22 are** rejected under 35 U.S.C. 103(a) as being unpatentable over Chen ('402) in view of Popov ('996), Livingston ('047) and Minkow et al. ('448) further in view of Wiley ('696).

Chen as modified by Popov, Livingston and Minkow et al. teaches a system, as described above, that fails to explicitly teach an isometric exercise method.

However, **Wiley** discloses a force exercise method comprising the steps of:

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g) recording a maximum force,
h) & l) selecting a force threshold lower than the maximum force,
i) determining the maximum endurance time by measuring the maximum time for which a force greater than or equal to the force threshold is maintained;

wherein the system further comprises comprising a computation unit associated with memory means and display means, the memory means containing a stored program for controlling the computation unit, the stored program including in particular an isometric exercise sequence;

j) in an intermittent contraction mode, generating an intermittent signal detectable by the patient to prompt alternate contractions and relaxations and counting the number of contraction reaching the force threshold after a sufficient relaxation characterized by a sufficiently low lifting force;

m) wherein the stored program includes an endurance measurement sequence for measuring the time for which an appropriate applied force is maintained (see abstract; col. 3, lines 1-60).

Since Livingston teaches an isometric force measuring method, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to provide a system similar to that of Chen as modified by Popov, Livingston and Minkow et al., above, with an isometric exercise method similar to that of Wiley in order to simultaneously lower the patient's resting blood pressure during exercise.

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10. **Claims 12-14 & 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (US 5,174,402) in view of Popov (EP 1 183 996) further in view of Weigle, Jr. (US 3,752,144).

Chen discloses a device, comprising:

a lower support base 3 adapted to support a standing patient in plantar support on said lower support base 3,

an upper support bracket 15 movable vertically above the lower support base 3 and conformed to bear vertically on the head of said patient,

means (11, 14) for selectively immobilizing the upper bearing bracket 15 in vertical position,

means 15 for measuring the vertical position of the upper support bracket 15, and

plantar support sensors 18 in the lower support base 3 adapted;

wherein the system has a vertical column 31 which carries the upper support bracket 15 and connects it to the lower support base 3;

wherein the system further comprises a computation unit 22 associated with memory means and display means (221, 222) and receiving signals from the vertical position measuring means 15 and the plantar support sensors 18 of the lower bearing base 3 (see figs. 1-7; col. 1, lines 6-15 & 35-55; col. 2, lines 20-42).

Chen discloses a system, as described above, that fails to explicitly teach a muscle strength, self-stretching, or a force measuring technique.

However, **Popov** discloses a self-stretching method, comprising the steps of:

a) placing the patient in a supine or standing position on the lower support base 8a,

c) measuring the amplitude of self-stretching of the patient by allowing the upper support bracket 6 to slide up and down according to vertical movements of the head of the patient and storing successive positions of the upper support bracket 6,

d) determining the maximum self-stretching value corresponding to the highest position recorded during the previous step,

f) measuring the self-stretching forces by storing the lifting value exerted by the head of the patient on the upper support bracket 6 when the latter is immobilized vertically (see figs. 1-3; see translated paragraphs 002-003 & 005-006).

Weigle, Jr. discloses muscle strength measuring system comprising a means 13 capable of measuring vertical force that the head of a patient applies thereon;

wherein the system further comprises a computation unit 15 associated with memory means and display means 180 and receiving signals from the load cell 13 (see figs. 1-2, 13 & 16-19; col. 1, lines 19-29 & 40-44; col. 2, lines 12-15 & 25-53; col. 3, lines 3-23 & 42-68; col. 9, lines 58-68; col. 10, lines 31-57; col. 11/lines 1-16).

In regards to **claims 12-14 & 16:**

Since Chen teaches a body height measurement device and Popov teaches a self-stretching technique to promote height growth, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to modify a system similar to that of Chen to include a self-stretching technique as taught by Popov in order to promote patient growth.

Similarly, since Popov teaches a self-stretching exercising technique, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to provide a system similar to that of Chen as modified by Popov, above, with a muscle strength measuring system as taught by Weigle, Jr. in order to evaluate the isometric strength of the patient's muscles.

Moreover, since it is known that one of the major shortcomings of measuring the total height of a patient to detect growth includes errors associated spine compression and head posture (see col. 1, lines 12-45 of US 4,883,066), it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to provide a system similar to that of Chen as modified by Popov and Weigle, Jr. above, with a means for measuring the vertical force of the patient in order to simultaneously establish the degree of spine compression, head posture and height of the patient so as to respectively determine what level of spine compression results in a given height.

Even moreover, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to provide a system similar to that of Chen as modified by Popov and Weigle, Jr. with a computing unit, storage, and display unit as taught by Weigle, Jr. in order to store and display the measured force and/or height.

Even moreover yet, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to provide a system similar to that of Chen as modified by Popov and Weigle, Jr., above, with a test for maintained normal plantar support of the foot or feet of the patient as claimed in order to ascertain that the patient

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only stretches the spine and neck region without raising the posterior area of the foot thereby resulting in an accurate height and/or growth measurement.

11. **Claim 15 is** rejected under 35 U.S.C. 103(a) as being unpatentable over Chen ('402) in view of Popov ('996) and Weigle, Jr. ('144) further in view of Minkow et al. (US 4,711,448).

Chen as modified by Popov and Weigle, Jr. teaches a system, as described above, that fails to explicitly teach an isometric exercise method.

However, **Minkow et al.** disclose a system comprising an anterior support 64 adapted to constitute a frontal bearing against which the anterior base of the thigh of the patient can bear on flexing by less than 30° or less than 20° (see figs. 1 & 3B).

Since Weigle, Jr. teaches a system for evaluating a variety of muscles, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to modify a system similar to that of Chen as modified by Popov and Weigle, Jr., above, to include an anterior support similar to that of Minkow et al. in order to exercise the muscles of the thighs.

Similarly, since Weigle, Jr. teaches a system wherein a plurality of forces associated with a variety of body portions are measured via load cell during testing, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to modify a system similar to that of Chen as modified by Popov, Weigle, Jr. and Minkow et al., above, to include an anterior support with a means for measuring the forward muscular force of the thigh in order to evaluate isometric strength thereof.

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12. **Claims 17 & 19-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen ('402) in view of Popov ('996) and Weigle, Jr. ('144) further in view of Wiley (US 5,398,696).

Chen as modified by Popov and Weigle, Jr. teaches a system, as described above, that fails to explicitly teach an isometric exercise method.

However, **Wiley** discloses a force exercise method comprising the steps of:

g) recording a maximum force,

h) & i) selecting a force threshold lower than the maximum force,

i) determining the maximum endurance time by measuring the maximum time for which a force greater than or equal to the force threshold is maintained;

wherein the system further comprises comprising a computation unit associated with memory means and display means, the memory means containing a stored program for controlling the computation unit; the stored program including in particular an isometric exercise sequence;

j) in an intermittent contraction mode, generating an intermittent signal detectable by the patient to prompt alternate contractions and relaxations and counting the number of contraction reaching the force threshold after a sufficient relaxation characterized by a sufficiently low lifting force;

m) wherein the stored program includes an endurance measurement sequence for measuring the time for which an appropriate applied force is maintained (see abstract; col. 3, lines 1-60).

Since Weigle, Jr. teaches an isometric force measuring method, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to provide a system similar to that of Chen as modified by Popov and Weigle, Jr., above, with an isometric exercise method similar to that of Wiley in order to simultaneously lower the patient's resting blood pressure during exercise.

13. **Claim 18 & 22 are** rejected under 35 U.S.C. 103(a) as being unpatentable over Chen ('402) in view of Popov ('996), Weigle, Jr. ('144) and Minkow et al. ('448) further in view of Wiley ('696).

Chen as modified by Popov, Weigle, Jr. and Minkow et al. teaches a system, as described above, that fails to explicitly teach an isometric exercise method.

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wherein the system further comprises comprising a computation unit associated with memory means and display means, the memory means containing a stored program for controlling the computation unit, the stored program including in particular an isometric exercise sequence;

j) in an intermittent contraction mode, generating an intermittent signal detectable by the patient to prompt alternate contractions and relaxations and counting the number

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of contraction reaching the force threshold after a sufficient relaxation characterized by a sufficiently low lifting force;

m) wherein the stored program includes an endurance measurement sequence for measuring the time for which an appropriate applied force is maintained (see abstract; col. 3, lines 1-60).

Since Weigle, Jr. teaches an isometric force measuring method, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to provide a system similar to that of Chen as modified by Popov, Weigle, Jr. and Minkow et al., above, with an isometric exercise method similar to that of Wiley in order to simultaneously lower the patient's resting blood pressure during exercise.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 2,590,055 to Timmerman discloses an apparatus for measuring muscular strength.

US 4,800,897 to Nilsson discloses device for detection of relative movements and/or positions of a part of the body.

US 7,104,926 to Carlson discloses exercising machine for working muscles that support the spine.

US 5,893,818 to Zahiri et al. discloses axial loading apparatus for strengthening the spine.

US 2001/0029342 to Perrard et al. discloses a muscle strength testing method and apparatus.

US 2003/0148863 to Thomas discloses a neck strengthening apparatus utilizing isometrics.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rene Towa whose telephone number is (571) 272-8758. The examiner can normally be reached on M-F, 8:00-16:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



/RTT/